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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,270	07/08/2003	Chuen-Ru Lee	9173-US-PA	1269

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JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
JONES, HUGH M	
ART UNIT	**PAPER NUMBER**
2128	

NOTIFICATION DATE	DELIVERY MODE
01/03/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

Office Action Summary	Application No.	Applicant(s)	
	10/604,270	LEE ET AL.	
	Examiner	Art Unit	
	Hugh Jones	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/5/2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 of U. S. Application 10/604,270, filed 7/8/2003, are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter since the claims do not produce a concrete, useful and tangible result.

4. It is not clear what constitutes the concrete, useful, tangible results. For example, consider claim 1:

> 1. (currently amended) A method to design a liquid crystal display device, implemented in a computing system, the method comprising the steps of:
>
> measuring at least one viewing angle in each of a plurality of liquid crystal display films, and determining a desired range of a cell gap between liquid crystal adjacent cells of a liquid crystal display device;
>
> calculating a panel transmittance rate and a gamut of a plurality of liquid crystal modules, and determining at least one value from the range of the cell gap;
>
> obtaining optic characteristics of a plurality of color filter films and color modules, and determining a set of optic characteristics for a color filter as well as for the liquid crystal display device; [[and]]
>
> measuring a set of measured values with respect to the set of optic characteristics for a modeling module;
>
> computing out a set of modeling value with respect to the set of optic characteristics for the modeling module; and
>
> adjusting a plurality of quantities[[, relating to]] representing the set of optic characteristics of the liquid crystal display device and the color filter according to a difference between the set of measured values and the set of modeling values, thereby producing [[a set of adjusted quantities for present as well as future design purposes]]a plurality of quantities representing an adjusted set of optic characteristics of the liquid crystal display device and the

The meaning of measuring a set of measured values is unknown. The scope is also unclear. It is noted that it is not possible to 'measure' "measured values" (they have already been measured. The values are the result of the measurement – the values themselves cannot be measured – as in measuring a number, for example). Adjusting some unknown quantity and thereby producing another unknown "adjusted" quantity does not provide for a concrete, useful, tangible result. "Computing out" a set of modeling values does not provide for any specific and substantial results. The claims are not concrete. "Adjusting ... according to a difference is not concrete. There is no criterion provided for the adjusting. The final result, "adjusting a set of [undefined] quantities ... thereby producing a plurality of quantities representing an adjusted set of optic characteristics ..." does not provide for a concrete, useful tangible result. Similarly, [claim 11] "correcting the standards for the product module according to a difference [not concrete]... and not a tangible, useful result. The recitation of "suitable" and similar wording, also indicates a lack of concreteness.

5. The above issues apply to all claims.

6. Analysis of claims 17-20 also indicates that the "system" is broad enough to include nonstatutory examples. The computer system is not recited as a limitation. This coupled with the fact that a computer program is not required until claim 18 indicates that the measuring system may not be required by the claim. Thus, the recitation (...a measuring system for...) has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and

where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

7. Note paragraph 61 of the specification discloses:

> readable by a CD-ROM drive); (ii) alterable information stored on writable storage media (*e.g.*, floppy disks within a diskette drive or hard-disk drive); or (iii) information conveyed to a computer by a communications medium, such as through a computer or telephone network, including wireless communications. The latter embodiment specifically includes information downloaded from the Internet and other networks. Such signal-bearing media, when carrying computer-readable instructions that direct the functions of the present invention, represent embodiments of the present invention.

8. The system claims are directed to method steps, and are not in standard US format.

9. An invention which is eligible for patenting under 35 U.S.C. 101 is in the useful arts when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. *The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a* ***"useful, concrete and tangible result."*** The test for practical application as applied by the examiner involves the determination of the following factors:

(1) Useful - The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

(a) the utility need not be expressly recited in the claims, rather it may be inferred.

(b) if the utility is not asserted in the written description, then it must be well established.

Furthermore, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(2) Tangible - Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium which enabled its functionality to be realized.

(3) Concrete - Another consideration is whether the invention produces a concrete result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue

experimentation.

10. A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in i) below), or (B) be limited to a practical application within the technological arts (discussed in ii) below). See Diamond v. Diehr, 450 U.S. at 183-84, 209 USPQ at 6 (quoting Cochrane v. Deener, 94 U.S. 780, 787-88 (1877)) ("A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.... The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence."). See also Alappat, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting Diamond v. Diehr, 450 U.S. at 192, 209 USPQ at 10). See also id. at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing O 'Reilly v. Morse, 56 U.S. (15 How.) at 114-19). If a physical transformation occurs outside the computer, a disclosure that permits a skilled artisan to practice the claimed invention, i.e., to put it to a practical use, is sufficient. On the other hand, it is necessary for the claimed invention taken as a whole to produce a practical application if there is only a transformation of signals or data inside a computer or if a

process merely manipulates concepts or converts one set of numbers into another.

11. The claims do not provide for a concrete, useful, tangible result.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

14. As explained in earlier office actions, the issues are as follows. Due to the idiomatic and grammatical issues associated with the specification and claims, it is difficult to determine the unambiguous meaning of the claims.

15. As explained in the last action, examples include (only a few are provided):

1 A method to design a liquid crystal display device, implemented in a computing system, the method comprising the steps of:

measuring at least one viewing angle among a plurality of liquid crystal display films, determining a range of a gap between liquid crystal cells of a liquid crystal display device (**how?**); based upon (**how?**) the panel transmittance and gamut of a plurality of liquid crystal modules, determining at least one value of the gap between liquid crystal cells of the liquid crystal display device; based upon optic characteristics of a plurality of color filter films and color modules, determining a set of optic characteristics for a color filter as well as for the liquid crystal display device; and **adjusting values** related to the set of optic characteristics of the liquid crystal display device and the color filter, ... according to a difference ... **thereby producing a set of adjusted values**. (**the meaning and purpose is unclear is not clear**)

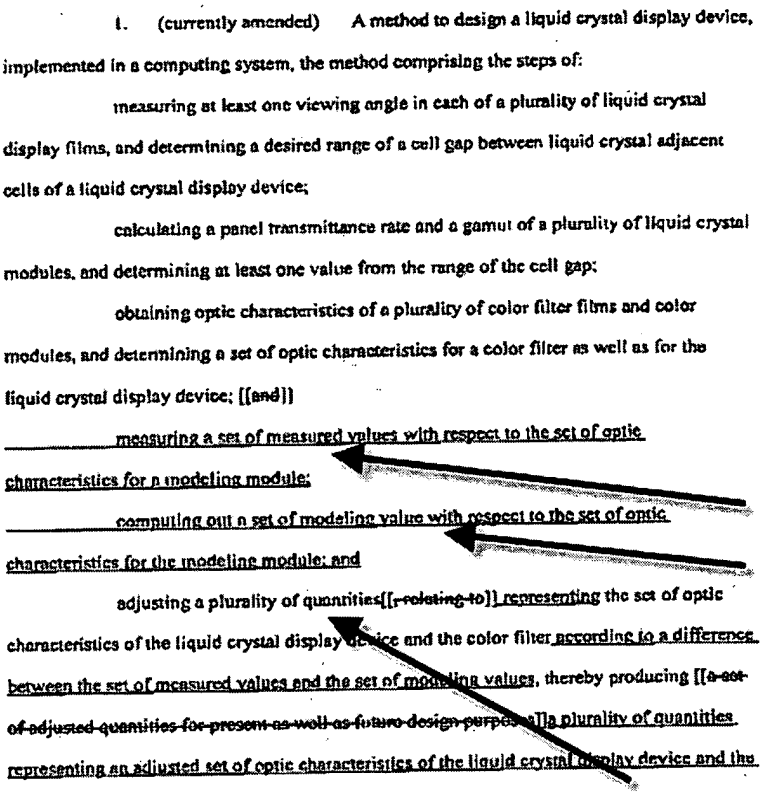
2. The method of claim 1, wherein the range of the gap is determined using (**how?**) at least two values of the gaps of the plurality of liquid crystal display films along with the viewing angles corresponding thereto, thereby establishing a

formula (**how?**) expressing the range using the values of the gaps and their corresponding viewing angles.

3. The method of claim 2, wherein the formula is obtained (**how?**) using trendline regression.

20. The system of claim 19, wherein a computer program is used to perform the steps. (**a program cannot perform steps**)

16. Furthermore, considering claim 1:



1. (currently amended) A method to design a liquid crystal display device, implemented in a computing system, the method comprising the steps of:

measuring at least one viewing angle in each of a plurality of liquid crystal display films, and determining a desired range of a cell gap between liquid crystal adjacent cells of a liquid crystal display device;

calculating a panel transmittance rate and a gamut of a plurality of liquid crystal modules, and determining at least one value from the range of the cell gap;

obtaining optic characteristics of a plurality of color filter films and color modules, and determining a set of optic characteristics for a color filter as well as for the liquid crystal display device; [[and]]

measuring a set of measured values with respect to the set of optic characteristics for a modeling module;

computing out a set of modeling value with respect to the set of optic characteristics for the modeling module; and

adjusting a plurality of quantities[[relating to]] representing the set of optic characteristics of the liquid crystal display device and the color filter according to a difference between the set of measured values and the set of modeling values, thereby producing [[a set of adjusted quantities for present as well as future design purposes]] a plurality of quantities representing an adjusted set of optic characteristics of the liquid crystal display device and the

The meaning of measuring a set of measured values is unknown. The scope is also unclear. It is noted that it is not possible to 'measure' "measured values" (they have already been measured. The values are the result of the measurement – the values themselves cannot be measured – as in measuring a number, for example). Adjusting

some unknown quantity and thereby producing another unknown "adjusted" quantity does not provide for a concrete, useful, tangible result. "Computing out" a "set of modeling values" does not provide for any specific and substantial results. The claims are not concrete. "Adjusting ... according to a difference is not concrete. There is no criterion provided for the adjusting. The final result, "adjusting a set of [undefined] quantities ... thereby producing a plurality of quantities representing an adjusted set of optic characteristics ..." does not provide for a concrete, useful tangible result. Similarly, [claim 11] "correcting the standards for the product module according to a difference [not concrete]... and not a tangible, useful result. The recitation of "suitable" and similar wording also indicates a lack of concreteness.

Claim Interpretation

17. Recitations following words such as *suitable* are provided no patentable weight. See claim 11 ("11. A method for designing a liquid crystal display module *suitable for* developing a system for designing a product, the system includes a database, wherein color characteristic parameters relating to a plurality of liquid crystal film, to a plurality of color filter film, to a plurality of testing modules, and to a plurality of").

No Prior Art Rejection

18. Respectfully, the Examiner spent considerable time reviewing Applicant's arguments, the amended claims as well as the specification and conducted an extensive search of the art – and the meaning of the claims is still not understood. No

prior art rejection is applied because it would require *further* considerable speculation regarding the meaning of the claims, for the reasons provided earlier.

19. As per the MPEP; see In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970) (if no reasonably definite meaning can be ascribed to certain claim language, the claim is indefinite, not obvious) and In re Steele, 305 F.2d 859,134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding the meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions).

Allowable Matter

20. It appears that determining an optimal distance between pixels in order to obtain a particular viewing angle is novel and non-obvious over the prior art of record. However, this is based upon an educated guess as to Applicant's invention (Applicant's arguments re "adjacent cells"). It has not been claimed or persuasively shown to be present in Applicant's specification.

Response to Arguments

21. Applicant's arguments, filed 10/3/2007, are not persuasive. Applicants are thanked for the amendments and remarks.

22. The 101 rejections are maintained for the reasons provided above. The 112-2 rejections are maintained and expanded for the reasons noted above.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to: Dr. Hugh Jones telephone number (571) 272-3781,

Monday-Thursday 0830 to 0700 ET,

or

the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279.
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label *PROPOSED* or *DRAFT*).

/Hugh Jones/

Primary Examiner, Art Unit 2128

December 26, 2007